Remarks

The non-final Office Action dated April 1, 2008 indicated that claims 3 and 12 stand objected to, claim 18 stands rejected under 35 U.S.C. §112(1); claims 1-4, 6-7, 9-13 and 15-16 stand rejected under 35 U.S.C. §102(e) over Reshef (U.S. Patent No. 6,529,559); claims 5 and 14 stand rejected under 35 U.S.C. §103(a) over the '559 reference in view of Ojard (US Patent No. 6,826,242); and claims 8 and 17 stand rejected under 35 U.S.C. §103(a) over the '559 reference. In the discussion set forth herein, Applicant does not acquiesce explicitly to any rejection or averment in the instant Office Action, unless Applicant expressly indicates otherwise.

Regarding the objections to claims 3 and 12, Applicant respectfully traverses; the previously-presented claims are clear under Section 112 or otherwise, and consistent with the specification, which describes using such a look-up table in connection with the separation/mapping of a data sequence into bits as claimed. However, Applicant believes the objections to be moot in view of the amendments to claims 3 and 12.

The Section 112(1) rejection of claim 18 is no longer applicable because Applicant has cancelled this claim.

Applicant respectfully traverses all of the claim rejections because the '559 reference, upon which each rejection relies, does not provide correspondence to the claimed invention as asserted in the Office Action. In attempting to show correspondence to the limitations of independent claim 1, the Office Action cites respectively to disparate columns 15, 9, 10 and then 3. These disparate portions not only fail to disclose individual limitations as asserted, they also fail to disclose the limitations as a whole (*i.e.*, these cited portions are not arranged as claimed). Regarding the asserted correspondence to limitations in claim 1, the cited portions of column 10 in the '559 reference asserted as "assigning a confidence value to each bit in a symbol" at page 4:6 of the Office Action appear to be directed toward the generation of soft symbol values relating to a reliability "of each possible symbol value" and do not disclose any confidence value assigned to a particular bit as claimed. *See, e.g.,* column 10:62-63, and column 11:6-10 (*i.e.*, reliabilities are based upon entire symbols). This is consistent with the purpose of the '559 reference as characterized at column 16:44-52, which is directed to a reduction in the number of soft symbol values used for each symbol. Similarly, the

Office Action's cited conversion of "hard decisions from the equalizer into corresponding confidence values" at page 4:10-11 also fails to provide correspondence to the claimed limitations "assigning a confidence value to each bit in a symbol."

In view of the above lack of correspondence to independent claim 1, and as also applicable to similar limitations of the remaining independent claims 9 and 10, Applicant submits that the Section 102 rejections of all of these claims are improper and should be reversed. Correspondingly, Applicant submits that the rejections of all of the dependent claims are also improper and should be reversed. While further discussion of the dependent claims would appear unnecessary to establish the impropriety of the rejections, Applicant has further addressed certain dependent claims.

Regarding the rejection of claim 2 (and correspondingly, claim 11), the cited mapping via Gray code in the '559 reference, Applicant submits that the cited portions of column 15 (as with the above discussion) refer to a confidence value assigned to a symbol, rather than to each bit in a symbol. *See, e.g.*, column 15:64-16:7. Regarding the rejection of claim 4 (and, correspondingly, claim 13), the Office Action indicates that the '559 reference "does not explicitly disclose" the claim limitations, and attempts to combine an indicated "separate embodiment" without showing how the combination would function together.

Applicant respectfully traverses the Section 103 rejections of dependent claims 5 and 14; the cited references fail to teach or suggest all of the claim limitations, and there is no motivation to modify the primary '559 reference. The Section 103 rejection is improper because the rejection relies upon the alleged correspondence in the '559 reference, which does not disclose the claim limitations as described above in connection with the Section 102 rejections. Moreover, the alleged motivation asserts that "reducing noise power and partially or fully cancelling interfering signals" without citing any evidence from the prior art in support of this alleged motivation and its applicability to the '559 reference and its approaches. Applicant submits that the Section 103 rejections of claims 5 and 14 are also improper for these reasons, and requests that they be removed.

Applicant respectfully traverses the Section 103 rejection of claim 8 and 17 over the sole '559 reference; the Office Action has failed to provide a reference that teaches or suggests all of the claim limitations, and the alleged motivation is unsupported by any

evidence. The Office Action asserts (at page 8) that the '559 reference "does not explicitly disclose de-puncturing the encoded data among decoding of a transmitted signal" yet fails to provide any reference disclosing, teaching or suggesting these limitations. In this regard, Applicant submits that the rejection fails to provide teaching or suggestion of all of the claim limitations for these reasons, as well as those discussed above in connection with the Section 102 rejections over independent claims 1 and 10, from which claims 8 and 17 respectively depend. Moreover, there is no motivation to modify the '559 reference because the Office Action relies upon an assertion that "one skilled in the art would find it obvious to depuncture the received data before decoding it" without citing to any supporting reference. Applicant therefore submits that the Section 103 rejection of claims 8 and 17 are also improper for these reasons, and requests that they be removed.

Applicant notes that certain amendments have been made to the claims to remove reference numerals relating to foreign-type claim structure (relating to exemplary embodiments), and to change terms from British English to American English.

Applicant further notes that new claims 19-21 have been added. Example embodiments supporting new claims 19-21 may be found at paragraphs 0066-0080. These claims are allowable over the cited references for the reasons stated above. In addition, none of the cited references teaches or suggests limitations directed to assigning a confidence value to each bit in a symbol using the position of the bit, or to further effecting convolutional decoding of a bit stream using the confidence values.

In view of the above, Applicant believes that each of the rejections/objections has been overcome and the application is in condition for allowance. Should there be any remaining issues that could be readily addressed over the telephone, the Examiner is asked to contact the agent overseeing the application file, Aaron Waxler, of NXP Corporation at (914)860-4296.

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